

WHAT IS CLAIMED IS:

- 1     1.     A vacuum packaging machine, comprising:  
2             a housing having a cover with a rubber packing attached to a border thereof  
3     and an outlet formed therein, and a heater for sealing a vacuum packaging bag;  
4             a hood hingedly connected to the housing to selectively open and close a top  
5     of the housing, the hood having a rubber packing; and  
6             a separation unit communicating with the outlet through a communicating  
7     member and connected to a vacuum pump;  
8             wherein the vacuum packaging machine forms a vacuum through the  
9     vacuum pump when the rubber packings of both the hood and the housing come into  
10    contact with each other
- 1     2.     The vacuum packaging machine according to claim 1, wherein the  
2     separation unit comprises an outlet port and an outlet port.
- 1     3.     The vacuum packaging machine according to claim 2, further comprising a  
2     communicating pipe connected to both the outlet port and the outlet port of the  
3     separation unit.
- 1     4.     The vacuum packaging machine according to claim 1, wherein the  
2     separation unit communicates with filter means for filtering impurities and oil  
3     contained in the vacuum packaging bag.

1        5.    The vacuum packaging machine according to claim 4, wherein the filter  
2        means comprises a filter casing, a filter inserted into the filter casing to eliminate the  
3        impurities, and a filter casing cover.

1        6.    A vacuum packaging machine, comprising:  
2            a housing having a separation assembly with a rubber packing attached to a  
3        border thereof and a heater for sealing a vacuum packaging bag, the separation  
4        assembly including a separation assembly casing having an outlet formed therein, and  
5        a cover mounted on the casing and provided with an outlet formed in a top surface  
6        thereof and a rubber packing; and  
7            a hood hingedly connected to the housing to selectively open and close a top  
8        of the housing, the hood having a rubber packing;  
9            wherein the vacuum packaging machine forms a vacuum 20 through a pump  
10       when the rubber packings of both the hood and the housing come into contact with  
11       each other.

1        7.    The vacuum packaging machine according to claim 6, wherein the  
2        separation assembly is inserted into a depression formed in the housing to be  
3        detachable from the housing.

1        8.    The vacuum packaging machine according to claim 6, wherein:  
2            the rubber packing inserted into the cover of the housing is constructed so  
3    that a plurality of projections are oppositely formed along an inner circumference  
4    thereof and channel parts are formed therein at locations where the projections face  
5    each other; and

6            the rubber packing inserted into the hood is constructed 10 so that a plurality  
7    of holes are formed therein at locations corresponding to those of the channel parts, so  
8    that vacuum spaces are formed when the channel parts and the holes come into  
9    contact with each other.

1        9.    The vacuum packaging machine according to claim 6, wherein:

2            the rubber packing inserted into the cover of the housing is constructed so  
3    that a plurality of holes are formed therein; and

4            the rubber packing inserted into the hood is constructed so that a plurality of  
5    each having both side notches by which channel grooves are formed are formed at  
6    locations corresponding to those of the holes in the rubber packing inserted into the  
7    cover, so that vacuum spaces can be formed when the holes of the cover and the hood  
8    come into contact with each other.

1     10.     A vacuum packaging machine, comprising:  
2             a housing having a cover with a rubber packing attached to a border thereof  
3     and a heater for sealing a vacuum packaging bag, the housing having at least one  
4     catch; and  
5             a hood hingedly connected to the housing to selectively open and close a top  
6     of the housing, the hood having a rubber packing and at least one locking hook  
7     formed thereon to be locked with the catch;  
8             wherein the vacuum packaging machine forms a vacuum through the  
9     vacuum pump when the rubber packings of the hood and the housing come into  
10    contact with each other; and  
11            wherein the catch pushes the locking hook down and thus a vacuum is  
12    formed in vacuum spaces.

1     11.    The vacuum packaging machine according to claim 10, wherein the catch  
2     includes a catching bar having a first end held by the housing and a second end  
3     operated in conjunction with a stepping motor, and a connection member for  
4     connecting the catching bar to a rotation shaft of the stepping motor.

1     12.    The vacuum packaging machine according to claim 10, wherein the catch  
2     includes two catching bars each having a first end held by the housing and a second  
3     end operated in conjunction with a stepping motor, the two catching bars being  
4     connected to each other through a fixing portion.

1        13. The vacuum packaging machine according to claim 11, wherein the housing  
2 is provided with a stopper, so that the stepping motor stops an operation thereof when  
3 the catching bar is locked with the stopper.

1        14. The vacuum packaging machine according to claim 12, wherein the housing  
2 is provided with a stopper, so that the stepping motor stops an operation thereof when  
3 the catching bar is locked with the stopper.

1        15. The vacuum packaging machine according to claim 10, further comprising a  
2 roll cartridge containing a vacuum packaging bag roll, the roll cartridge being  
3 attached to a rear wall of the housing.

1        16. The vacuum packaging machine according to claim 14, wherein:  
2            the housing includes a locking hole formed therein; and the roll cartridge  
3 includes a locking projection formed thereon to be detachable from the locking hole.

1        17. The vacuum packaging machine according to claim 15, wherein the roll  
2 cartridge includes a cover mounted thereon to protect the vacuum packaging bag, the  
3 cover being rotated around a rotation shaft formed on an outer circumference of the  
4 roll cartridge at a predetermined angle.

1        18. The vacuum packaging machine according to claim 16, wherein the cover  
2 includes cutting means mounted thereon to allow the vacuum packaging bag to be cut  
3 and used in a certain length.

1        19. The vacuum packaging machine according to claim 17, wherein the cover  
2 includes a slot formed therein to allow the cutting means to cut the vacuum packaging  
3 bag while moving along the slot.

1        20. The vacuum packaging machine according to claim 17, wherein the cutting  
2 means includes a cutter, a casing for accommodating the cutter and a handle for  
3 allowing the cutter to cut the vacuum packaging bag while moving the cutter along 15  
4 the slot.

1        21. The vacuum packaging machine according to claim 19, wherein the cutting  
2 means includes a fastening portion placed below the cutter, thus securely fastening the  
3 vacuum packaging bag at the time of cutting operation.

1        22. A system for controlling a vacuum packaging machine having a housing  
2        having a depression formed therein, a heater placed on the housing to seal a vacuum  
3        packaging bag at a predetermined temperature, a pump placed in the housing to  
4        eliminate air remaining in the vacuum packaging bag and form a vacuum in the  
5        vacuum packaging bag, a pressure sensor for measuring a pressure of the vacuum  
6        formed through the pump, and a power supply unit for supplying operating power to  
7        both the pump and the pressure sensor, the system comprising:  
8                a switch unit for selecting various modes and setting data after the power is  
9        supplied from the power supply unit;  
10               a control unit supplied with the power from the power supply unit and driven  
11        thereby, the control unit receiving electrical signals output from both the switch unit  
12        and the pressure sensor and then outputting control signals to both the pump and the  
13        heater;  
14               a timer electrically connected to the control unit to provide exact time  
15        information; and  
16               a display unit for receiving the output signals from the control unit and  
17        displaying various operating states of the vacuum packaging machine.

1        23. The vacuum packaging machine control system according to claim 21,  
2        further comprising a memory unit for storing therein input/output data of the control  
3        unit, the memory unit being implemented as an Electrically Erasable Programmable  
4        Read Only Memory (EEPROM).

1        24. The vacuum packaging machine control system according to claim 21,  
2        wherein the power supply unit is operated in a Switching Mode Power Supply  
3        (SMPS) manner.

1        25. The vacuum packaging machine control system according to claim 21,  
2        wherein the switch unit comprises a vacuumizing and sealing mode switch selected to  
3        automatically and sequentially perform vacuumizing and sealing functions, a sealing  
4        mode switch selected to perform only a sealing function, a container mode switch  
5        selected to seal a separate container, a vacuum pressure setting switch selected to set  
6        user's desired vacuum pressure after the vacuumizing and sealing mode switch is  
7        selected, a sealing time setting switch, a drive switch to select drive of the vacuum  
8        packaging machine after data are input through the switches, and a cancel switch to  
9        stop the drive of the vacuum packaging machine.

1        26. The vacuum packaging machine control system according to claim 21,  
2        wherein the display unit is operated in response to data output from the control unit,  
3        and comprises vacuum pressure setting indication lamps for displaying corresponding  
4        set values whenever a user sets a vacuum pressure, sealing time indication lamps for  
5        displaying corresponding set values whenever the user sets a sealing time, and mode  
6        indication lamps for displaying corresponding set values whenever the user sets a  
7        mode.



- 1        27. The vacuum packaging machine control system according to claim 21,
- 2        further comprising a buzzer for outputting a predetermined alarm when a sealing time
- 3        set by the user has elapsed.